**Lesson Plan** Day 1, 2,

**Course/Lesson Algebra 2** Ch 5 -1 **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N 5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

G6 Demonstrating deductive reasoning and mathematical justification

**Objective(s):** Multiply and divide monomial

**Opening:**  5 minute opener for 3-4

Online quiz 5-1

**Strategies:** Review Key concepts p. 224

Practice Key concepts for Power of a Power, Power of a Product and Power of a Quotien

Use power point examples

Make a slogan or song to recall rules for simplifying radical expressions

Kagan’s Mix and Match Activity with index cards

**Critical Thinking/Questions:**  Determine which is greater, or ? Explain your answer.

**Closing:**  introduce critical question

**Assessment:**  p.226 # 18 – 32

Skills Practice 5-1

p. 227 # 33 – 55

**Lesson Plan** Day 3, 4, 5

**Course/Lesson Algebra 2** Ch 5 -2 **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N 5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

G6 Demonstrating deductive reasoning and mathematical justification

**Objective(s):** add and subtract polynomials

Multiply polynomials

**Opening:**  5 minute check over 5-1

Online quiz 5-2

Quiz 5-1 to 5-2

**Strategies:** Use power point examples

discuss polynomial, terms like terms, trinomial, binomial

FOIL----use algebra tiles for visual—Link on edline

Use algebra tiles to demonstrate FOIL

Use algebra tiles to find DPMA

Use Study Guide 5-2 as classwork

“I have who has “ activity with index cards

**Critical Thinking/Questions:**  Determine which is greater, or ? Explain your answer.

**Closing:**  check progress and encourage discussion on critical thinking question

**Assessment:**  p. 231 # 17 – 33

Practice 5-2

p. 232 # 37 - 46

**Lesson Plan** Day 6, 7, 8

**Course/Lesson Algebra 2** Ch 5 -3 **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N 5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

G6 Demonstrating deductive reasoning and mathematical justification

**Objective(s):** Divide polynomials using long division

Divide polynomials using synthetic division

**Opening:**  5 – minute check

Online self check 5-3

Quiz 5-1 to 5-3

Outline a summary of steps to simplify polynomials

**Strategies:** Long division examples—use one Note

Guided practice in Kagan Groups

Synthetic division examples—use One Note

Guided practice in Kagan Groups

**Critical Thinking/Questions:**  Determine which is greater, or ? Explain your answer.

**Closing:**  compare and contrast the difference between long division and synthetic division

**Assessment:**  Skills 5-3

p. 236 – 237 # 15-35 odd

p. 236-237 # 16 -34 even

**Lesson Plan** Day 9, 10, 11, 12

**Course/Lesson Algebra 2** Ch 5 - 4 **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N 5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

G6 Demonstrating deductive reasoning and mathematical justification

**Objective(s):** Factor polynomials

Simplify polynomial quotients by factoring

**Opening:**  5-minute check

Online self check 5-4

Compare and contrast + - X / “like terms”

Quiz 5-3 and 5-4

**Strategies:** use concept summary page 239

**Critical Thinking/Questions:**  Determine which is greater, or ? Explain your answer.

**Closing:**  Kagan groups review steps for factoring

**Assessment:** p. 242 # 15 – 28

p. 243 # 29 – 38

Skills 5-4

Review pages 276 -278 # 1 – 34

**Lesson Plan** Day 13, 14, 15

**Course/Lesson Algebra 2** Ch 5 -5 **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N 5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

G6 Demonstrating deductive reasoning and mathematical justification

**Objective(s):** Mid Chapter Test Ch 5

Simplify Radicals

Use a calculator to approximate radicals

**Opening:**  Mid Chapter Test Ch 5—sections 1-4

5 –minute opener

Online Quiz Ch 5

**Strategies:** Examples via one note

Students present via one note

Students work problems on white board

Key concepts page 245 and p. 246

**Critical Thinking/Questions:**  Under what conditions is the equation = xy true. Why?

**Closing:**  introduce critical thinking question

**Assessment:**  Skills 5-5

p. 248 # 21-39 odd

**Lesson Plan**  Day 16, 17, 18

**Course/Lesson Algebra 2** Ch 5.6 **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N 5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

G6 Demonstrating deductive reasoning and mathematical justification

**Objective(s):** Simplify radical expressions

Add, subtract, multiply and divide radical expressions

**Opening:**  5 minute opener

Online self check 5-6

Quiz 5-5

**Strategies:** power point examples

Review “like terms”

Kagan groups make up problems with certain characteristics

Use a calculator to approximate values for radicals

**Critical Thinking/Questions:**  Under what conditions is the equation = xy true. Why?

**Closing:**  check progress and encourage discussion on Critical thinking question

**Assessment:**  p. 254 # 15- 30

p. 254 # 35 – 36

Skills 5-6

**Lesson Plan** Days19, 20, 21

**Course/Lesson Algebra 2** Ch 5-7 **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N 5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

G6 Demonstrating deductive reasoning and mathematical justification

**Objective(s):** Write expressions with rational exponents in radical form and vice versa

Simplify expressions in exponential or radical form

**Opening:**  Practice quiz 2 page 256

5 –minute opener

Online self check 5-7

**Strategies:** Define Radical form p. 257 & 258

Students produce steps to write rational exponents as a radical expression and visa versa

**Critical Thinking/Questions:**  Under what conditions is the equation = xy true. Why?

**Closing:**  check progress and encourage discussion on critical thinking question

**Assessment:**  p. 261 # 21- 40

p. 261 # 41- 60

Skills 5-7

**Lesson Plan** Day 22, 23, 24

**Course/Lesson Algebra 2** Ch 5 -8 **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N 5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

G6 Demonstrating deductive reasoning and mathematical justification

**Objective(s):** Solve equations containing radicals

Solve inequalities containing radicals

**Opening:**  5 minute opener

Online self check quiz 5-8

Quiz 5-6 and 5-7

**Strategies:** powerpoint examples

Compare and contrast FOIL with polynomials to FOIL with radicals

**Critical Thinking/Questions:**  Under what conditions is the equation = xy true. Why?

**Closing:**  check progress and encourage discussion on critical thinking question

**Assessment:**  p. 266 # 13 – 28

Skills 5-8

Practice 5-8

**Lesson Plan** Day 25, 26, 27

**Course/Lesson Algebra 2** Ch 5 -9 **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N 5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

G6 Demonstrating deductive reasoning and mathematical justification

**Objective(s):** add and subtract complex numbers

Multiply and divide complex numbers

**Opening:**  5 minute opener

Online self check quiz 5-9

Quiz 5-8 and 5-9

**Strategies:** Debate the steps for finding a common denominator and rationalizing a denominator.

**Critical Thinking/Questions:**  Under what conditions is the equation = xy true. Why?

**Closing:**  Finalize answer for critical thinking question

**Assessment:**  p. 274 # 18- 35

p. 274 # 48 – 54

Skills 5-9

**Lesson Plan** Day 28, 29

**Course/Lesson Algebra 2** Ch 5 **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N 5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

G6 Demonstrating deductive reasoning and mathematical justification

**Objective(s):** review objectives from 5-5 to 5-9

Assess objectives from, 5-5 to 5-9

**Opening:**  p. 281 # 14 – 30 classwork

Test 5-5 to 5-9

**Strategies:** work in groups---think pair share problems from page 281

**Critical Thinking/Questions:**  Under what conditions is the equation = xy true. Why?

**Closing:**  Tournament competition to review

**Assessment:**  p. 278-280 # 35 – 75